

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A Group III nitride semiconductor element comprising
a substrate;
a first nitride semiconductor layer composed of AlN single crystal having a thickness of .005 to .5 μm which is provided on the substrate;
a second nitride semiconductor layer composed of $\text{Al}_{x1}\text{Ga}_{1-x1}\text{N}$ ($0 < x1 \leq 0.05$) which is provided on the first nitride semiconductor layer;
~~and~~ a third nitride semiconductor layer composed of $\text{Al}_{x2}\text{Ga}_{1-x2}\text{N}$ ($x1 + 0.02 \leq x2 \leq 0.5$) which is provided on the second nitride semiconductor layer; and
a fourth nitride semiconductor layer which is provided on the third nitride semiconductor layer, the fourth nitride semiconductor layer including:
an n-type contact layer composed of $\text{Al}_a\text{Ga}_{1-a}\text{N}$ ($0 < a < 1$),
an n-type cladding layer composed of $\text{Al}_b\text{Ga}_{1-b}\text{N}$ ($0 < b < 0.4$) which is provided on the n-type contact layer, and
a light-emitting layer which has a multiple quantum well (MQW) structure including a well layer composed of $\text{Ga}_{1-s}\text{In}_s\text{N}$ ($0 < s < 0.1$) and a barrier layer composed of $\text{Al}_c\text{Ga}_{1-c}\text{N}$ ($0 \leq c < 0.3$ and $c < b$) doped with Si, and is provided on the n-type cladding layer.
2. (original): A Group III nitride semiconductor element according to claim 1, wherein said substrate is selected from a group consisting of sapphire single crystal, Si single crystal, SiC single crystal, AlN single crystal, and GaN single crystal.
3. (previously presented): A Group III nitride semiconductor element according to claim 1, wherein said second nitride semiconductor layer is formed of an island-like structure in which crystals of different heights are arranged so as to be separated from one another.

4. (previously presented): A Group III nitride semiconductor element according to claim 3, wherein the Al content of said second nitride semiconductor layer differs from region to region of the island-like structure.

5. (canceled).

6. (previously presented): A Group III nitride semiconductor element according to claim 1, wherein said second nitride semiconductor layer is composed of $\text{Al}_{x1}\text{Ga}_{1-x1}\text{N}$ ($0 < x1 \leq 0.02$).

7. (previously presented): A Group III nitride semiconductor element according to claim 1, wherein said second nitride semiconductor layer has a thickness of 1 to 500 nm.

8. (original): A Group III nitride semiconductor element according to claim 7, wherein said second nitride semiconductor layer has a thickness of 1 to 400 nm.

9. (original): A Group III nitride semiconductor element according to claim 8, wherein said second nitride semiconductor layer has a thickness of 1 to 300 nm.

10. (previously presented): A Group III nitride semiconductor element according to claim 1, wherein said second nitride semiconductor layer is composed of an undoped semiconductor.

11. (currently amended): A Group III nitride semiconductor light-emitting device comprising a Group III nitride semiconductor element according to claim 1, ~~wherein:~~

the fourth nitride semiconductor layer further includes a p-type layer provided on said third nitride semiconductor layer of said semiconductor element, said fourth nitride semiconductor layer including an n-type layer, a light-emitting layer, and a p-type layer, which are successively formed atop said third nitride semiconductor layer in this order; a light-emitting layer,

a negative electrode provided on said n-type contact layer; and

a positive electrode provided on said p-type layer.

12. (original): A light-emitting diode comprising a Group III nitride semiconductor light-emitting device according to claim 11.

13. (original): A laser diode comprising a Group III nitride semiconductor light-emitting device according to claim 11.

14. (previously presented): A semiconductor device comprising a Group III nitride semiconductor element according to claim 1.

15. (canceled).

16. (previously presented): A Group III nitride semiconductor element according to claim 4, wherein the second nitride semiconductor layer has a region having a lower Al content at a position closer to the substrate and a higher Al content at a position farther from the substrate.